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B1 CLAIMS

1 A method of routing a packet of binary digital signals through a network, said method  
2 comprising the steps of:  
3 receiving at a switch in said network the packet of binary digital signals as encoded  
4 binary digital signals including ~~encoded~~ binary digital signals used to route the packet  
5 through the network; and  
6 copying said encoded binary digital signals used to route the packet through the  
7 network, at least for decoding the encoded binary digital signals.

1 2 The method of claim 1, and further comprising a step of decoding the copied encoded  
2 binary digital signals.

1 3 The method of claim 2, wherein the step of receiving the packet of binary digital signals  
2 comprises receiving the packet serially; and further comprising a step of deserializing the decoded  
3 binary digital signals.

1 4 The method of claim 3, and further comprising a step of translating the serialized and  
2 decoded binary digital signals.

1 5 The method of claim 4, and further comprising a step of routing the received packet of  
2 binary digital signals in accordance with the translated binary digital signals.

1 6 The method of claim 5, wherein the step of routing comprises routing the packet of binary  
2 digital signals to another switch in the network.

1 7 The method of claim 5, wherein the step of routing comprises routing the packet of binary  
2 digital signals to its destination in the network.

1 8 The method of claim 1, wherein said encoded binary digital signals used to route the packet  
2 through the network comprise an encoded destination address.

1 9 The method of claim 1, wherein said encoded binary digital signals used to route the packet  
2 through the network comprise encoded binary digital signals specifying a route through the  
3 network if decoded.

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10 An integrated circuit comprising: a switch adapted to receive a packet of binary digital  
2 signals as encoded ~~binary~~ digital signals including encoded binary digital signals used to route the  
3 packet through the network;

4 said switch being further adapted to copy the encoded binary digital signals used to route  
5 the packet through the network, at least for decoding the encoded binary digital signals.

1 11 The integrated circuit of claim 10, wherein said switch is further adapted to serially receive  
2 said packet and to serially copy the encoded binary digital signals used to route the packet  
3 through the network.

1 12 The integrated circuit of claim 11, wherein said switch is further adapted to decode and  
2 deserialize of the copied encoded binary digital signals used to route the packet through the  
3 network.

1 13 The integrated circuit of claim 12, wherein said switch is further adapted to translate the  
2 decoded and serialized binary digital signals.

1 14 The integrated circuit of claim 13, wherein said switch is coupled in the network, said  
2 switch being adapted to route the received packet of binary digital signals in accordance with the  
3 translated binary digital signals.

1 15 The integrated circuit of claim 10, wherein the encoded binary digital signals used to route  
2 the packet through the network comprise an encoded destination address.

1 16 The integrated circuit of claim 10, wherein the encoded binary digital signals used to route  
2 the packet through the network comprise encoded binary digital signals specifying a route through  
3 the network if decoded.

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17 A method of routing a packet of binary digital signals through a network, said method  
2 comprising the steps of:

3 receiving at a switch in the network the packet of binary digital signals as encoded  
4 binary digital signals including encoded binary digital signals specifying a route through the  
5 network without decoding.

1 18 The method of claim 17, wherein said encoded binary digital signals specifying a route  
2 through the network without decoding comprise a portion of the header of the packet of binary  
3 digital signals.

1 19 The method of claim 17, and further comprising a step of: routing the packet of binary  
2 digital signals in accordance with the encoded binary digital signals specifying a route through said  
3 network without decoding.

1 20 The method of claim 19, wherein the step of routing comprises routing the packet of binary  
2 digital signals to another switch in the network.

1 21 The method of claim 19, wherein the step of routing comprises routing the packet of binary  
2 digital signals to a destination in the network.

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B7T1* 22 An integrated circuit comprising:

2 a switch adapted to receive a packet of binary digital signals, the packet of binary digital  
3 signals including encoded binary digital signals specifying a route through a network without  
4 decoding.

1 23 The integrated circuit of claim 22, wherein said encoded binary digital signals comprise a  
2 portion of the header of the packet of binary digital signals.

1 24 The integrated circuit of claim 23, wherein said switch is coupled in the network, said  
2 switch being adapted to route the packet of binary digital signals in accordance with the encoded  
3 binary digital signals specifying a route through the network without decoding.

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B7T1* 25 An integrated circuit comprising: a route unit adapted to produce binary digital signals to  
2 be included in a packet of binary digital signals that after encoding specify a route through a  
3 network without decoding.

1 26 The integrated circuit of claim 25, wherein said route unit is embodied in a network  
2 interface component (NIC).

1    27      The integrated circuit of claim 26, wherein said NIC is coupled to a switch, said switch  
2      being adapted to route the packet of binary digital signals through the network in accordance with  
3      the encoded binary digital signals specifying a route through the network without decoding.